

## HUMAN GENETIC VARIATION

### New York State Science Core Subject Learning Standards: Commencement Level – The Living Environment

Activity	Standard	Description
2	1	Describe and explain the structures and functions of the human body at different organizational levels (e.g., systems, tissues, cells, organelles).
1, 2, 4	2	Explain how the structure and replication of genetic material result in offspring that resemble their parents.
4	2	Explain how the technology of genetic engineering allows humans to alter the genetic makeup of organisms.
2	3	Explain the mechanisms and patterns of evolution.
2, 3, 4	5	Explain disease as a failure of homeostasis.
3	5	Relate processes at the system level to the cellular level in order to explain dynamic equilibrium in multicelled organisms.
2	7	Describe the range of interrelationships of humans with the living and nonliving environment.

### New York State English Language Core Subject Learning Standards: Commencement Level

All activities	1	Make perceptive and well-developed connections to prior knowledge.
All activities	1	Support interpretations and decisions about relative significance of information with explicit statement, evidence, and appropriate argument.
2, 3, 4, 5	3	Analyze, interpret, and evaluate ideas, information, organization, and language of a wide range of general and technical texts and presentations across subject areas.
3, 4, 5	3	Make effective use of details, evidence, and arguments and of presentational strategies to influence an audience to adopt their position.

### New York State Mathematics Core Subject Learning Standards: Commencement Level

2, 4	3	Use addition, subtraction, multiplication, division, and exponentiation with real numbers and algebraic expressions.
1, 2, 4	7	Model real-world situations with the appropriate function.

NEW YORK ALIGNMENT FOR NIH SUPPLEMENT HUMAN GENETIC VARIATION

1, 2, 4	7	Translate among the verbal descriptions, tables, equations, and graphic forms of functions.
<b>New York State Interdisciplinary Problem Solving Learning Standards: Commencement Level</b>		
3, 4	1	Analyze science/technology/society problems and issues on a community, national, or global scale and plan and carry out a remedial course of action.
3	1	Explain and evaluate phenomena mathematically and scientifically by formulating a testable hypothesis, demonstrating the logical connections between the scientific concepts guiding the hypothesis and the design of an experiment, applying and inquiring into the mathematical ideas relating to investigation of phenomena, and using technological tools and procedures to assist in the investigation and in the communication of results.
<b>New York State Health Core Subject Learning Standards: Commencement Level</b>		
4, 5	1	Apply prevention and risk reduction strategies which can delay the onset or reduce the risk of potential health problems into adulthood.
4, 5	1	Evaluate how the multiple influences which affect health decisions and behaviors can be altered.
4, 5	2	Recognize how individual behavior affects the quality of the environment.
3, 5	3	Demonstrate how to evaluate health information, products, and services for validity and reliability.
3, 4, 5	3	Demonstrate advocacy skills in promoting individual, family, and community health.